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ABSTRACT

In addition to investigating the differences in inferred student self-concept scores of high reading achiever (HRA) and low reading achiever (LRA) kindergarten and first grade students, a study examined the relationship of self-concept and reading achievement by gender. Six kindergarten and four first grade teachers from central Kentucky evaluated 100 students' self-concept as learner by using the Florida Key, with subscores for self-concept factors of relating, asserting, coping, and investing. The 50 HRAs and 50 LRAs consisted of 49 males and 51 females, further subdivided into 18 HRA males, 32 HRA females, 31 LRA males, and 19 LRA females. Teachers also identified the five highest and five lowest reading achievers on their class list. Results indicated that HRAs received higher self-control scores than LRAs. A large number of females had high self-concepts as learners and were also HRAs, and a high percentage of males had low self-concepts and were LRAs. Both males and females who had low self-concepts as learners were also LRAs. (Tables comparing self-concept scores of LRAs and HRAs, self-concept scores of female and male HRAs, and self-concept scores of female and male LRAs are included, and 19 references are appended.) (MM)

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Inferred Self-concept

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Inferred Self-Concept As Learner As It Relates To Reading Achievement And Gender: Kindergarten And First Grade Students

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Abstract

The primary purpose of this study was to investigate the differences in inferred student self-concept scores of high reading achiever and low reading achiever kindergarten and first grade students. The second purpose was to investigate their self-concept and reading achievement by gender.

The six kindergarten and four first grade teachers, who participated, evaluated each of their student's self-concept as learner by using the Florida Key (Purkey, Cage and Fahey, 1986). Subscores for the self-concept factors of relating, asserting, coping, and investing, plus a total score were computed for each student. Each teacher identified his/her five highest and five lowest reading achievers (HRA's and LRA's). A total of 100 subjects were reported as follows; 50 HRA's and 50 LRA's consisting of 49 males and 51 females. There were 18 HRA males, 32 HRA females, 31 LRA males, and 19 LRA females.

Analyses using the t-test were computed to compared the total and each of the four self-concept scores of the HRA subjects with the self-concept scores of the LRA subjects. All areas of self-concept scoring were significantly higher at the .01 level for the HRA's.

Gender was examined as a moderating variable related to self-concept and academic achievement. More females were reported as HRA's and more males were reported as LRA's. Comparisons were made of each of the five self-concept scores of

the male HRA's with each of the five self-concept scores of the female HRA's, using the t-test. No statistically significant differences were found in any of the five self-concept areas between the two HRA groups. Similarly, no statistically significant differences were found on the self-concept scores when the male LRA's were compared to the female LRA's.

This study found that high reading achievers received higher self-concept scores than low reading achievers. Self-concept scores of males when compared to females in both the high and the low reading achiever groups were not significantly different.

A larger number of females had high self-concepts as learners and were also high reading achievers. Conversely, a larger number of males had low self-concepts and were low reading achievers. Both males and females who had low self-concepts as learners also were low reading achievers.

Review of Literature

In a review of what is basic for young children, Dr. Lillian G. Katz (1977, p. 17) declared that "every child has to have an adequate - not excessive - self esteem." How children feel about themselves is reflected in how they relate to others and also how they relate to learning. In recognition of the importance of a positive self-concept, early childhood education texts and reference books discuss self-concept skills as an important part of the curriculum for teaching young children (Barbe, Milone, Lucas & Humphrey, 1980; Eliason & Jenkins, 1986; Spodek, Saracho & Davis, 1987). As children learn to feel positive about themselves, they learn to feel positive about school activities, social interactions, and learning experiences. Most investigators and teachers agree that the underachieving student sees him/herself as less capable, less worthy, and less adequate than his/her more successful peer (Purkey, 1970).

It is believed by many educators that a positive self-concept facilitates achievement in specific academic content areas of learning. When discussing the importance of a positive self-image and its relation to mathematical acquisition, Grossnickle, Reckzeh, Perry & Ganoe (1983) conclude that:

Fostering the development of the child's positive self-image should be the paramount concern in the design of the entire curriculum. The child's attitudes toward mathematics are part of the total self-concept. (p. 76)

When discussing classroom reading instruction Duffy and Roehler (1986, p. 61) present the idea that "if a student has a positive self-concept, the chances for normal developmental reading growth are good..." They further explain that self-image is positively related to levels of learning expectations, motivation, and confidence; all of which help a student persevere in moving through the stages of developmental reading growth. When researching achievement in reading Wattenberg & Clifford (1964) found the measures of self-concept scored in kindergarten as significant predictors of progress in later reading achievement. The importance of a positive self-concept in the process of learning to read is emphasized in one of the International Reading Association's publications, Self-Concept and Reading. In this book authors Quandt and Selznick offer suggestions to teachers on how to help improve the self-concepts of reading students.

Some reviews of research lead to a negative conclusion of finding a causal relationship between self-concept and academic achievement in intervention programs (Scheirer & Kraut, 1979). Other research reports and reviews as presented above support the conclusion that there is a positive relationship between self-concept and academic achievement. Also, theoretical review supports the belief that a positive self-concept should be formed at an early age in order to enhance positive learning attitudes towards academics. In the book Self Concept and School

Achievement by William W. Purkey (1970), an extensive review of research is presented demonstrating the persistent and significant relationship between self-concept and academic achievement. Purkey continues to explain the importance of the impact of school experiences on the growth and development of the student's self-concept and also emphasizes the importance of the academic environment at a young age. He states, "Next to home, the school is the single most important force in shaping the child's self concept" (p. 40). How the student's self-concept is measured and how the results can be interpreted for remedial use are other areas of great importance. Proper teacher assessment, interpretation, and presentation of self-concept curriculum topics in the classroom are essential for positive student self-concept growth.

Instrumentation

The instrument used in this study to measure self-concept is The Florida Key: An Instrument to Infer Student Self-Concept As Learner prepared by William Watson Purkey, Bob N. Cage, and Mary Fahey (1986). The importance of self-concept "as learner" is stressed. The authors stress that school experiences should not be underestimated. Students entering school take on a major new identity; namely, self-concept as learner. Self-concept as learner is that part of a person's "global self" that relates directly to school achievement (Purkey, et.al., 1986, p.3). Students' perceptions of themselves as learners apparently serve

as personal guidance systems in directing their school behavior and plays a critical role in determining students' academic performances (Purkey, et.al., 1986, p.3).

The Key contains 23 interrogative items that describe student behaviors in a classroom. The items identify behaviors that occur more often by students who have a good self-concept as learner. These are grouped under four factors:

- (I) RELATING reflects a basic trust in people;
- (II) ASSERTING suggests a trust in one's own value;
- (III) INVESTING implies a trust in one's potential; and
- (IV) COPING indicates a trust in one's own academic ability (Purkey, et.al., 1986, pp. 5-6).

Each item is rated on a 0-5 point scale with 0 for never, 1 very seldom, 2 once in a while, 3 occasionally, 4 fairly often, and 5 very often.

Scores are totaled and recorded as high, moderate, or low learner self-concept. The KEY is attractive because of its brevity and ease of administration and is suitable for elementary teachers to use with a wide range of students. It alerts the classroom teacher to the academic needs of students scoring moderate to low and to the need to provide activities for developing their self-esteem.

Various validity and reliability studies have been conducted over a period of 12-15 years using the KEY in different locations, with different groups of teachers, and for different

purposes. As the instrument has been revised into its current form it appears to be among the most valid instruments of its kind and to have consistently high indexes of reliability (Purkey, et.al., 1986).

There have been other attempts to develop inferred self-concept scales. However, these have had limited validity information, questionable reliability evidence, and insufficient information for users to interpret the results. Most have focused on global measurement of self-concept rather than self-concept as learner. The Inferred Self-concept Scale by E.L. McDaniel and the Behavioral Academic Self-Esteem (BASE) by Stanley Coopersmith and Ragnar Gilberts are examples. The Behavioral Academic Self-Esteem scale does not appear to reflect academic characteristics and focuses instead on general or social self-esteem (Review by Herbert W. Marsh, Dept. of Education, University of Sydney, Australia, 1984). A study of the Maryland Preschool Self-Concept Scale indicated that the self-concept scores did not correlate significantly with the teacher ratings of children's behaviors (Smith, Marcia D., 1977). In a study of the measurement of self-concept and self-report Combs, Soper, and Courson found that there was no significant relationship between student self-reports and measures of inferred self-concept made by trained observers (1963).

It has also been suggested that differences in academic self-esteem develop as a reaction to school success and failure

rather than act as a cause of such school performances. An implication for education appears to be that teachers in the early elementary grades should be alert to the behaviors of themselves and others in the school setting which may decrease a child's initially high level of self-esteem (Bridgeman and Shipman, 1978).

There is a need for research investigations which address the study of self-concept and specific academic achievement in young children. It is the intent of this study to investigate measures of self-concept in low and high reading achievement groups of young students. Because research findings in an educational setting have found that gender differences exist in many spheres of functioning inclusive of self-concept (Minuchin, 1966), it is also the intent of this study to investigate the gender differences of the self-concept scores of the higher reading achievement (HRA) and low reading achievement (LRA) subjects.

Method

A representative group of six kindergarten and four first grade central Kentucky teachers participated in this study. Each teacher was asked to randomly list the students in her/his class and identify each student's gender as male (M) or female (F). After the assessment instrument was explained, the teachers were

then asked to evaluate each student's self-concept by using The Florida Key (Purkey, Cage, & Fahey, 1986), a twenty-three item instrument designed to measure inferred student self-concept as a learner. The teachers were also asked to identify the five highest and the five lowest reading achievers on the class list by placing an "*" by the names of the five highest reading achievers (HRA's) and by placing an "X" by the names of the five lowest reading achievers (LRA's). Reading achievement was defined as the acquisition of those skills listed in the area of reading in the Kentucky state curriculum guidelines of essential skills for kindergarten and first grade respectively. A total of 100 subjects were reported as follows: 50 HRA's and 50 LRA's consisting of 49 males and 51 females. There were 18 HRA males, 32 HRA females, 31 LRA males, and 19 LRA females. The subscores for the self-concept factors of relating, asserting, coping, and investing plus a total score were computed for each student.

Results

Analyses using the t-test were computed to compare the self-concept scores of the HRA subjects with the self-concept scores of the LRA subjects in the following areas: total, relating, asserting, coping, and investing. The LRA group had a total mean score of 50.20 and the HRA group had a total mean score of 99.32, $t(98) = 12.81$, $p < .01$. The LRA group had a relating mean score of 14.24 and the HRA group had a relating

mean score of 21.66, $t(98) = 7.05$, $p < .01$. The LRA group had an asserting mean score of 8.72 and the HRA group had an asserting mean score of 17.90, $t(98) = 10.46$, $p < .01$. The LRA group had a coping mean score of 16.22 and the HRA group had a coping mean score of 32.70, $t(98) = 13.12$, $p < .01$. And, finally, the LRA group had an investing mean score of 10.96 and the HRA group had an investing mean score of 27.24, $t(98) = 11.92$, $p < .01$. Results demonstrated statistically significant differences between groups at the .01 level in all five self-concept areas. All areas of self-concept scoring were significantly higher for the HRA's.

Insert Table 1 about here

It was duly noted in this study that there was a disproportionate number of HRA and LRA subjects when being described by gender. It was observed that more females were reported as HRA's and more males were reported as LRA's. As gender may be a moderating variable in the establishment of self-concept and as there existed a difference in the proportion in number of male and female HRA and LRA subjects, the self-concept scores of each of the two reading achievement groups (HRA's and LRA's) were analyzed as to differences between gender.

Analyses using the t-test were computed to compare the self-concept scores of the 32 female HRA's and the 18 male HRA's. The total mean score of the female HRA's was 100.43 and the male HRA's was 97.33, $t(48) = -.70$. The relating mean score for the female HRA's was 21.78 and for the male HRA's was 21.44, $t(48) = -.27$. The asserting mean score for the female HRA's was 18.21 and for the male HRA's was 17.33, $t(48) = -.92$. The coping mean score for the female HRA's was 32.84 and for the male HRA's was 32.50, $t(48) = -.32$. And, the investing mean score for the female HRA's was 27.63 and for the male HRA's was 26.56, $t(48) = -.54$. No statistically significant differences were found between female and male HRA's. Female mean scores were slightly higher than male mean scores in all five self-concept areas.

Insert Table 2 about here

Similarly, analyses using the t-test were computed to compare the self-concept scores of the 19 female LRA's and the 31 male LRA's. The total mean score for the female LRA's was 51.94 and for the male LRA's was 49.12, $t(48) = -.42$. The relating mean score of the female LRA's was 14.89 and for the male LRA's was 13.84, $t(48) = -.58$. The asserting mean score for the female LRA's was 8.68 and for the male LRA's was 8.74, $t(48) = .04$. The coping mean score for the female LRA's was 17.42 and

for the male LRA's was 15.48, $t(48) = -.82$. And, finally, the investing mean score for the female LRA's was 11.74 and for the male LRA's was 10.48, $t(48) = -.61$. No statistically significant differences between the mean scores of the female and male LRA's were found in all five of the self-concept areas. All the mean scores reflected a higher scoring difference for the female LRA's in all the self-concept areas except asserting in which the male LRA's received a slightly higher mean score.

Insert Table 3 about here

Discussion

This study found that high reading achievers received higher self-concept scores than lower reading achievers. These inferred self-concept as a learner measures not only included the total score but also the scores of the four self-concept factors of relating, asserting, coping, and investing. This indicates that teacher perceived inferred self-concept as a learner measures may be higher for high reading achievers and lower for low reading achievers. It was also found that the self-concept scores of the females when compared to the male high reading achievers were not significantly different. Similarly, the self-concept scores of the female when compared to the male low reading achievers were not significantly different. This indicates that teacher

perceived inferred self-concept as a learner measures may not differ when comparing high reading achievers and low reading achievers by gender.

The authors have concluded that inferred self-concept as a learner, using The Florida Key instrument, can be used as a predictor of reading achievement when investigating young students (kindergarten and first grade). It may be inferred by the results of this study that kindergarten and first grade students who have high self-concepts as learners may be high reading achievers and those who have low self-concepts as learners may be low reading achievers. It can further be concluded that a larger proportion of kindergarten and first grade female students will have high self-concepts as learners and will also be high reading achievers. Conversely, a higher proportion of kindergarten and first grade male students will have low self-concepts as learners and will also be low reading achievers. It is recommended that further and more extensive studies of these relations be conducted. It is hoped that these findings may stimulate further efforts aimed at increasing students self-concepts as learners and its ramifications for increasing reading achievement.

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Table 1

A Comparison of Self-Concept Scores of Low ReadingAchievers (LRA's) and High Reading Achievers (HRA's)

Self- Concept Variable	Reading Achievement Level	n	Mean	d.f.	t value
Total	LRA	50	50.20		
	HRA	50	99.32	98	12.81 *
Relating	LRA	50	14.24		
	HRA	50	21.66	98	7.05 *
Asserting	LRA	50	8.72		
	HRA	50	17.90	98	10.46 *
Coping	LRA	50	16.22		
	HRA	50	32.20	98	13.12 *
Investing	LRA	50	10.96		
	HRA	50	27.24	98	11.92 *

* $p < .01$

Table 2

A Comparison of Self-Concept Scores of Female and MaleHigh Reading Achievers

Self-					
Concept					
Variable	Gender	n	Mean	d.f.	t value
Total	Female	32	100.43		
	Male	18	97.33	48	-.70
Relating	Female	32	21.78		
	Male	18	21.44	48	-.27
Asserting	Female	32	18.21		
	Male	18	17.33	48	-.92
Coping	Female	32	32.84		
	Male	18	32.50	48	-.32
Investing	Female	32	27.63		
	Male	18	26.56	48	-.54

* $p < .05$

Table 3

A Comparison of Self-Concept Scores of Female and MaleLow Reading Achievers

Self-Concept					
Variables	Gender	n	Mean	d.f.	t value
Total	Female	19	51.94		
	Male	31	49.12	48	-.42
Relating	Female	19	14.89		
	Male	31	13.84	48	-.58
Asserting	Female	19	8.68		
	Male	31	8.74	48	.04
Coping	Female	19	17.42		
	Male	31	15.48	48	-.82
Investing	Female	19	11.74		
	Male	31	10.48	48	-.61

* $p < .05$